

ACTION RESEARCH IN EDUCATION

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ERNIE STRINGER

Curtin University of Technology



Upper Saddle River, New Jersey
Columbus, Ohio

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OBJECTIVE SCIENCE AND NATURALISTIC INQUIRY: A COMPARISON

Objective science and naturalistic inquiry provide quite different approaches to research. Both provide the means for teachers and other educational practitioners to acquire knowledge and understanding that assists them to accomplish their complex professional duties. As the previous discussion has indicated, however, they have quite different purposes, processes, and outcomes, the first being to acquire objective, factual information about a limited number of variables, and the second to understand more clearly the multiple dimensions of socially constructed human behavior. These attributes are summarized in Figure 2.1.

We need to be wary of setting up boundaries that make too fixed the distinctions between the two paradigms. Qualitative research does, for instance, sometimes make use of statistical data to extend or clarify information emerging in the research process. Conversely, quantitative researchers sometimes engage in preliminary qualitative studies to identify the variables to be included in their research. Neither paradigm is right or wrong, better or worse. Each seeks to attain different purposes, using different processes to attain

OBJECTIVE SCIENCE	NATURALISTIC INQUIRY
Purposes	Purposes
Studies events and behaviors <i>objectively</i> .	Studies people's <i>subjective</i> experience.
<i>Hypothesizes</i> a relationship between variables of interest.	<i>Explores perspectives</i> on an issue or problem.
Processes	Processes
Precisely <i>measures</i> quantities of variables.	<i>Describes</i> people's experience and perspective of the issue/problem.
Carefully <i>controls</i> events and conditions within the study.	Allows events to unfold <i>naturally</i> .
Uses <i>statistical analysis</i> of data.	Uses <i>interpretive methods</i> to analyze the data.
Outcomes	Outcomes
Seeks <i>explanations</i> for events and behaviors.	Seeks to <i>understand</i> events and behaviors.
Describes <i>causes</i> of events and behaviors.	Constructs <i>detailed descriptions</i> of events and behaviors.
<i>Generalizes</i> findings to sites and people not included in the study.	Findings are <i>setting and person specific</i> .

Figure 2.1
Objective Science and Naturalistic Inquiry

different types of outcome.¹ Each is evaluated by different sets of criteria to determine the strength, quality, or rigor of the research (see the section on validity in Chapter 3).

To ensure that their research does not become caught in the muddy waters between the paradigms, however, researchers need to frequently ask themselves "What is the purpose or

¹Distinguishing between different research paradigms is not always straightforward. The problem partially relates to the rather loose use of associated terminology, where the literature often refers to *quantitative* and *qualitative* methods as equivalent to the distinction between objective science and naturalistic inquiry and fails to differentiate between the research *paradigm* and the research *methods*. There is a difference, for instance, between *qualitative research* and *qualitative methods*. It is possible to use qualitative methods to acquire and partially analyze data in experimental science—to use qualitative data objectively. Conversely, it is possible to use numerical or quantitative data within a naturalistic study to clarify emerging perspectives.